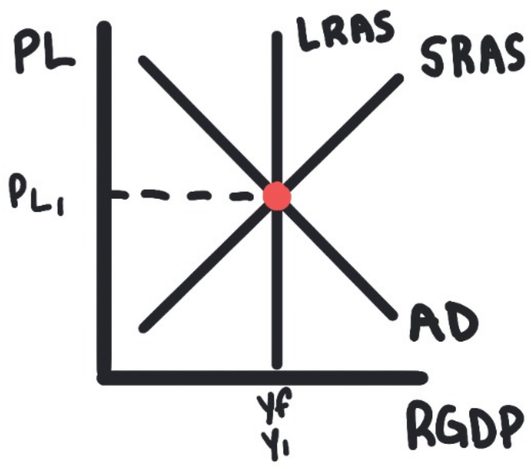
The Ultimate AD-AS Cheat Sheet

Everything you need to know about Recessionary Gaps, Inflationary Gaps, and Self-Correction in 5 minutes

The Curves

AD-AS Model



Aggregate Demand (AD)

Represents the total demand for all goods and services in an economy

Movement Along the AD Curve

- Inverse relationship between

PL and AD

- **Real Wealth Effect:** PL↑ Consumption ↓
- **Interest Rate Effect:** PL↑ Investment ↓
- **Net Exports Effect:** PL↑ Net Exports ↓

Shifters of Aggregate Demand

- **Remeber:** AD = C + I + G + NX
- Any non-price factor that causes a change in Consumption, Investment, Government Spending, or Net Exports will shift AD
- **EX 1:** Increased business confidence > Increased Investment > AD shifts right
- **EX 2:** Increased personal income taxes > Decreased Consumption > AD shifts left

Short-Run Aggregate Supply (SRAS)

Represents the total amount of all goods and services that producers are willing and able to provide at different price levels in the short run

Movement Along the SRAS Curve

- Direct relationship between

PL and SRAS

- Direct relationship is due to **sticky wages and input prices**
- When PL increases, firms can sell their product at higher prices. The wages of their employees do not adjust immediately (ex: signed contract with fixed wage)
  - Profits increase and firms have incentive to increase production

Shifters of Short-Run Aggregate Supply

- SRAS shifters are non-price factors that affect firms' ability or willingness to produce
- Change in resource prices (ex: wages)
- Change in productivity
- Change in government policy (ex: taxes or subsidies)
- Change in inflationary expectations
- Change in number of sellers

Long-Run Aggregate Supply (LRAS)

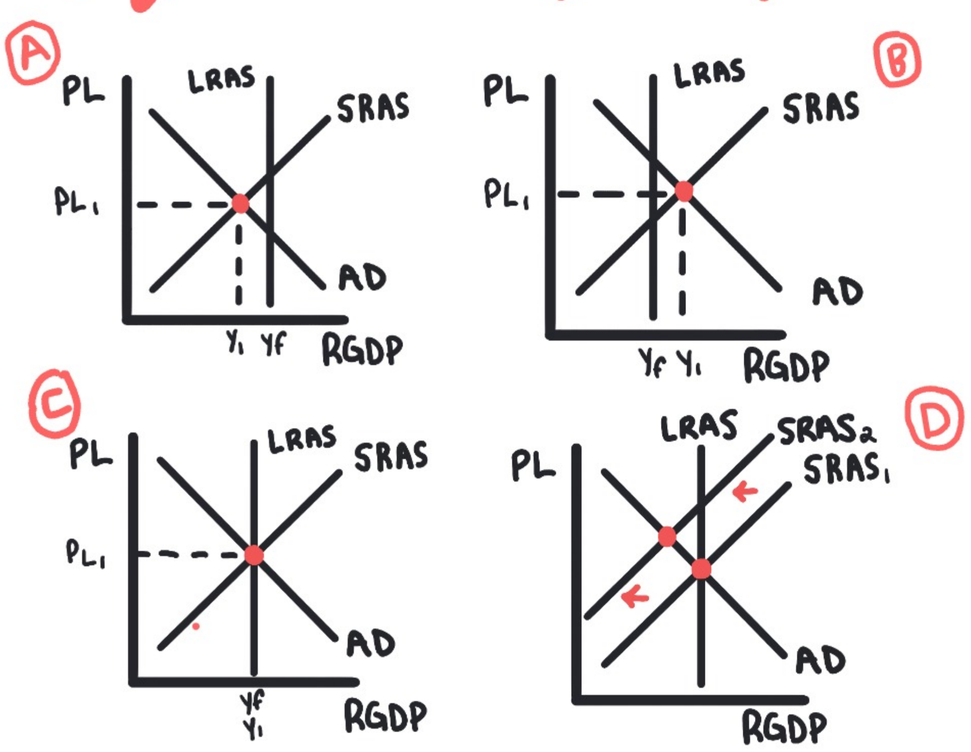
Represents the total amount of all goods and services that producers are willing and able to provide when all resources are fully and sustainably employed

- LRAS is vertical because the price level doesn't change how much we *can* produce in the long run
- LRAS represents a country's potential output level (the level of output achieved when the economy is at it's natural rate of unemployment)
- LRAS and the PPC show us the same thing - a country's potential output

Shifters of Long-Run Aggregate Supply

- **Remember:** Any change in the economy's *potential* to produce goods and services will shift the LRAS curve
- Change in amount of land, labor, capital
- Change in quality of land, labor, capital
- Improvements in technology

Equilibrium & Output Gaps



Recessionary Gap (A)

- **Actual output < Potential output**
- **Actual unemployment > NRU**
- **Policy Fix:**
  - Expanionary fiscal policy
  - Expansionary monetary policy

Inflationary Gap (B)

- **Actual output > Potential output**
- **Actual unemployment < NRU**
- **Policy Fix:**
  - Contractionary fiscal policy
  - Contractionary monetary policy

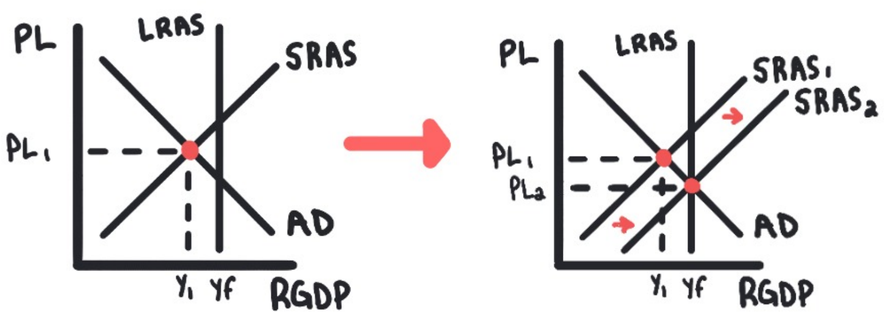
Long-Run Equilibrium (C)

- **Actual output = Potential output**
- **Actual unemployment = NRU**
- The economy returns to this state through policy action or self-adjustment

Stagflation (D)

- Output gap characterized by high levels of inflation and high unemployment
- Caused by a decrease in SRAS
- EX: A key input, like oil, become less available and more expensive

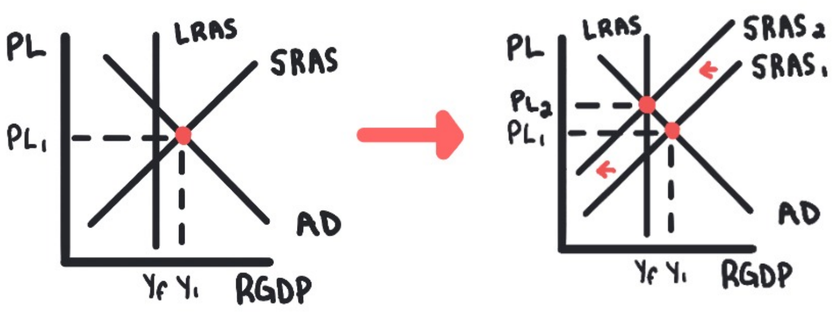
Closing Output Gaps

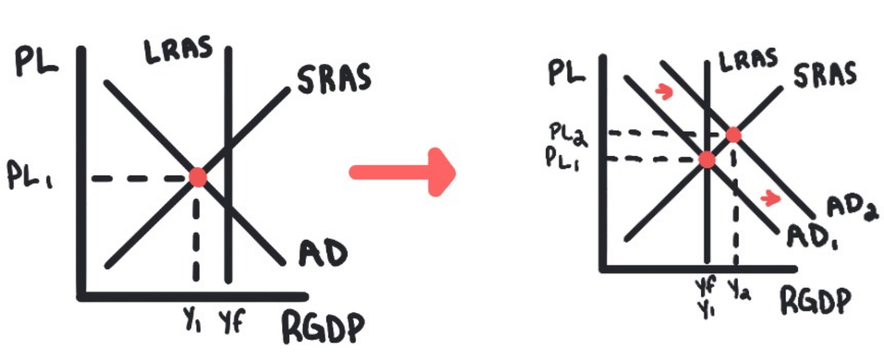


Fiscal and Monetary Policy

Both fiscal and monetary policy close output gaps by shifting the AD curve

- **Fiscal Policy** > Changes to government spening and taxes > Changes Consumption (C) and Government Spending (G) > AD shifts
- **Monetary Policy** > Changes to money supply > Interest rates increase or decrease > Changes to Investment (I) and interest-sensitive Consumption (C) > AD shifts





Long-Run Self-Adjustment

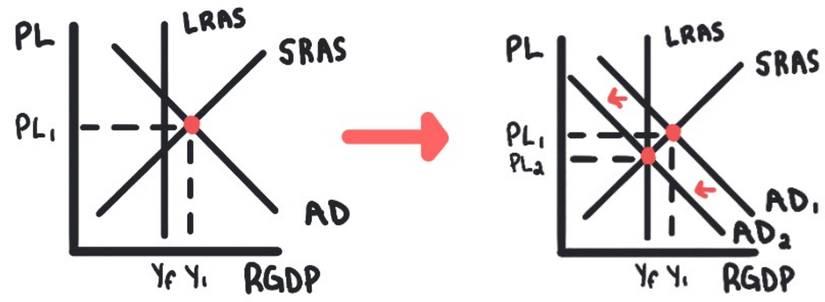
Even if no policy action is taken, the economy will still return to long-run equilibrium

Step 1: Economy enters an output gap

Step 2: Wages and input prices eventually adjust to the new price level

Step 3: Firms hire more / fewer workers due to the change in wage prices

Step 4: SRAS shifts to return the economy back to LRE



MULTIPLIERS

The Key: Every dollar of government spending or tax cuts results in a larger total impact of GDP due to the "ripple effect" of spending

How much impact each change in spending or taxes has depends on the country's Marginal Propensity to Consume (MPC)

$$MPC = \frac{\Delta \text{ Spending}}{\Delta \text{ Disposable Income}}$$

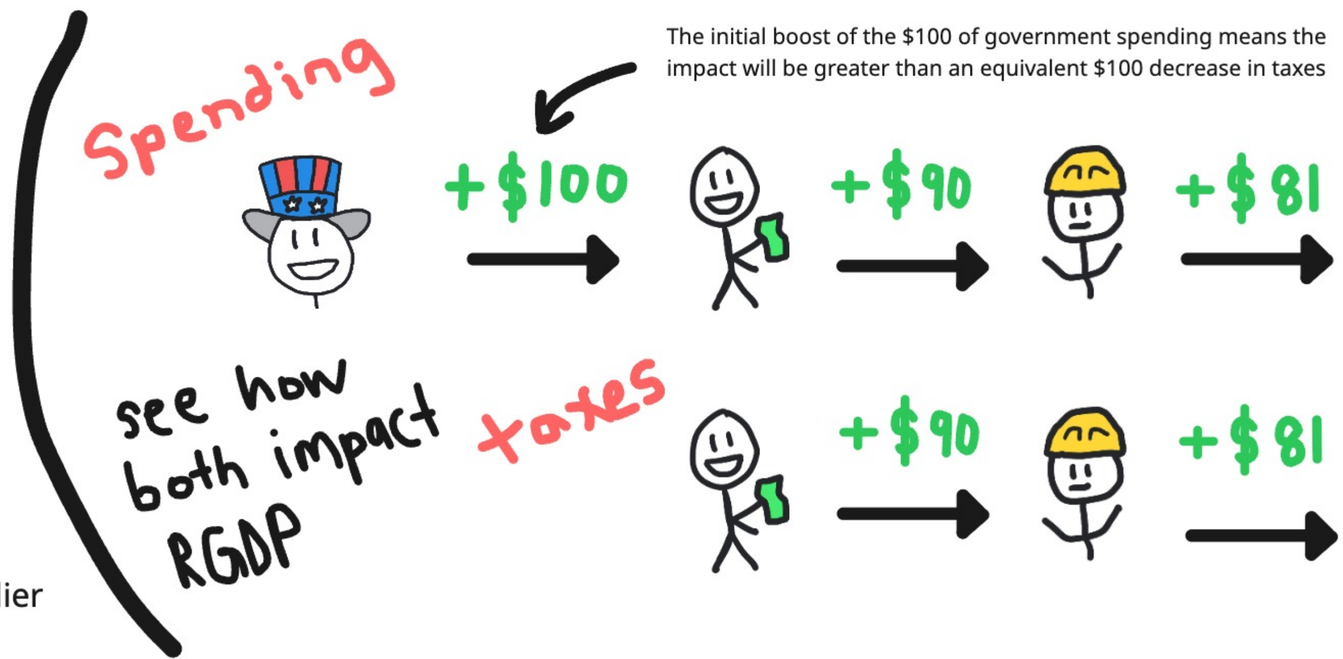
$$MPS = \frac{\Delta \text{ Savings}}{\Delta \text{ Disposable Income}}$$

$$1 = MPC + MPS$$

$$\text{Spending Multiplier} = \frac{1}{MPS}$$

$$\text{Tax Multiplier} = \frac{-MPC}{1 - MPC}$$

Total Potential Change to RGDP = Change in Spending * Spending Multiplier



The initial boost of the $100 of government spending means the impact will be greater than an equivalent $100 decrease in taxes